

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Claims 1-18 (Cancelled)

Claim 19 (Currently Amended): An acoustic wave device comprising:

a layer of ferroelectric material; and

a substrate,

wherein the layer of ferroelectric material lies between a first electrode deposited on a surface of the substrate or as a constituent part of the substrate and a second electrode,

the layer of ferroelectric material includes a positive first polarization domain and a negative second polarization domain, and a pitch between the first polarization domain and the second polarization domain is less ~~then~~ than 1000 nm.

Claim 20 (Previously Presented): The acoustic wave device as claimed in claim 19, wherein the second electrode is deposited on a surface of the layer of ferroelectric material.

Claim 21 (Previously Presented): The acoustic wave device as claimed in claim 19, further comprising a cover resting on the substrate, said cover having the second electrode, to create a space between said second electrode and the layer of ferroelectric material.

Claim 22 (Currently Amended): The ~~surface~~ acoustic wave device as claimed in claim 21, wherein the cover is configured to be removed from the layer of ferroelectric material.

Claim 23 (Previously Presented): The acoustic wave device as claimed in claim 19, wherein the layer of ferroelectric material includes an unpolarized third domain.

Claim 24 (Previously Presented): The acoustic wave device as claimed in claim 19, wherein the first domain and second domain are formed as a series of linear domains.

Claim 25 (Previously Presented): The acoustic wave device as claimed in claim 24, wherein the series of linear domains further include unpolarized domains.

Claim 26 (Previously Presented): The acoustic wave device as claimed in claim 19, wherein the first domain and the second domain are in a matrix arrangement.

Claim 27 (Previously Presented): The acoustic wave device as claimed in claim 26, further including an unpolarized domain.

Claim 28 (Previously Presented): The acoustic wave device as claimed in claim 19, wherein the ferroelectric material is lead titanium zirconium oxide.

Claim 29 (Previously Presented): The acoustic wave device as claimed in claim 28, wherein the first electrode is a platinum/titanium alloy.

Claim 30 (Previously Presented): The acoustic wave device as claimed in claim 19, wherein the substrate is made of silicon.

Claim 31 (Previously Presented): The acoustic wave device as claimed in claim 19, wherein the second electrode is made of aluminum.

Claim 32 (Previously Presented): The acoustic wave device as claimed in claim 28, further comprising at least one electrode whose surface is defined by two parameters y and x satisfying an equation of $y = f(x)$, where f is a real function.

Claim 33 (Previously Presented): The acoustic wave device as claimed in claim 28, wherein a spatial polarization distribution in a plane of the layer of ferroelectric material follows a geometrical law so that a resulting polarized surface is defined by two parameters y and x satisfying an equation $y = f(x)$, where f is a real function.

Claims 34-36 (Cancelled)

Claim 37 (Previously Presented): An acoustic wave device comprising:
a layer including a ferroelectric material; and
a substrate,
wherein the layer lies between a first electrode deposited on a surface of the substrate or as a constituent part of the substrate and a second electrode,
the layer includes a positive first polarization domain and a negative second polarization domain, and a pitch between the first polarization domain and the second polarization domain corresponds to a frequency greater than one gigahertz.

Claim 38 (Previously Presented): The acoustic wave device of Claim 37, wherein the second electrode is deposited on a surface of the layer.

Claim 39 (Previously Presented): The acoustic wave device of Claim 37, further comprising a cover resting on the substrate, the cover having the second electrode, to create a space between said second electrode and the layer.

Claim 40 (Currently Amended): The ~~surface~~ acoustic wave device of Claim 39, wherein the cover is configured to be removed from the layer.

Claim 41 (Previously Presented): The acoustic wave device of Claim 37, wherein the layer includes an unpolarized third domain.

Claim 42 (Previously Presented): The acoustic wave device of Claim 37, wherein the first domain and second domain are formed as a series of linear domains.

Claim 43 (Previously Presented): The acoustic wave device of Claim 42, wherein the series of linear domains further include unpolarized domains.

Claim 44 (Previously Presented): The acoustic wave device of Claim 37, wherein the first domain and the second domain are arranged in a matrix.

Claim 45 (Previously Presented): The acoustic wave device of Claim 44, further including an unpolarized domain.

Claim 46 (Previously Presented): The acoustic wave device of Claim 37, wherein the ferroelectric material includes lead titanium zirconium oxide.

Claim 47 (Previously Presented): The acoustic wave device of Claim 46, wherein the first electrode includes a platinum/titanium alloy.

Claim 48 (Previously Presented): The acoustic wave device of Claim 37, wherein the substrate includes silicon.

Claim 49 (Previously Presented): The acoustic wave device of Claim 37, wherein the second electrode includes aluminum.

Claim 50 (Previously Presented): The acoustic wave device of Claim 46, further comprising at least one electrode, a surface thereof being defined by a first parameter, y , and a second parameter, x , satisfying an equation of $y = f(x)$, where f is a real function.

Claim 51 (Previously Presented): The acoustic wave device of Claim 46, wherein a spatial polarization distribution in a plane of the layer follows a geometrical law so that a resulting polarized surface is defined by two parameters y and x satisfying an equation $y = f(x)$, where f is a real function.